

CLAIMS

1. A water absorbent material comprising a copolymer of an anhydropolyamino acid having at least one ethylenically unsaturated double bond in a molecule (A) and a water-soluble monomer having an ethylenically unsaturated double bond (B).

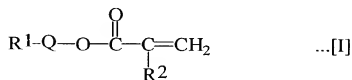
2. A water absorbent material according to claim 1, wherein the water-soluble monomer having an ethylenically unsaturated double bond (B) is at least one selected from the group consisting of (meth)acrylic acid, alkali metal salt of (meth)acrylic acid, ammonium salt of (meth)acrylic acid, and an amidated compound of (meth)acrylic acid.

3. A water absorbent material according to claim 1, wherein the water-soluble monomer having an ethylenically unsaturated double bond (B) is a monomer having an ethylenically unsaturated double bond, and a sulfonic acid group and/or a sulfonate group in a molecule.

4. A water absorbent material according to claim 1, wherein the anhydropolyamino acid having at least one ethylenically unsaturated double bond in a molecule (A) is a reaction product of an anhydropolyamino acid having no ethylenically unsaturated double bond in a molecule (A-1) and a compound which has an ethylenically unsaturated double bond and a functional group having reactivity with the anhydropolyamino acid (A-1) in a molecule (A-2).

5. A water absorbent material according to claim 1, wherein the copolymer comprises gel particles.

6. A water absorbent material according to claim 4, wherein the compound which has an ethylenically unsaturated double bond and a functional group having reactivity with the anhydropolyamino acid (A-1) in a molecule (A-2) is a compound represented by the following general formula [I]:



wherein R^1 represents at least one functional group selected from the group consisting of amino group, epoxy group, carboxyl group, carbodimide group, oxazoline group, imino group and isocyanate group, Q represents an alkylene group having 1 to 10 carbon atoms, and R^2 represents hydrogen or an alkylene group having 1 to 4 carbon atoms.

5

7. A water absorbent material according to claim 4, wherein the anhydropolyamino acid having no ethylenically unsaturated double bond in a molecule (A-1) is polysuccinimide.

10

8. A water absorbent material according to claim 1, wherein a portion or all of the anhydropolyamino acid having an ethylenically unsaturated double bond in a molecule (A) is hydrolyzed.

15

9. A water absorbent material according to claim 1, wherein a water absorption ratio of a physiological saline solution is 10 g/g or more.

10. A water absorbent material comprising a copolymer of an anhydropolyamino acid having at least one ethylenically unsaturated double bond in a molecule (A), a water-soluble monomer having an ethylenically unsaturated double bond (B), and polysaccharides (C).

20

11. A water absorbent material according to claim 10, wherein the anhydropolyamino acid having at least one ethylenically unsaturated double bond in a molecule (A) is a reaction product of an anhydropolyamino acid having no ethylenically unsaturated double bond in a molecule (A-1) and a compound which has an ethylenically unsaturated double bond and a functional group having reactivity with the anhydropolyamino acid (A-1) in a molecule (A-

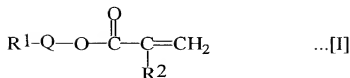
25

2).

12. A water absorbent material according to claim 10, wherein the copolymer comprises gel particles.

30

13. A water absorbent material according to claim 11, wherein the compound which has an ethylenically unsaturated double bond and a functional group having reactivity with the anhydropolyamino acid (A-1) in a molecule (B) is a compound represented by the following general formula [I]:



wherein R¹ represents at least one functional group selected from the group consisting of amino group, epoxy group, carboxyl group, carbodimide group, oxazoline group, imino group and isocyanate group, Q represents an alkylene group having 1 to 10 carbon atoms, and R² represents hydrogen or an alkylene group having 1 to 4 carbon atoms.

14. A water absorbent material according to claim 11, wherein the anhydropolyamino acid having no ethylenically unsaturated double bond in a molecule (A-1) is polysuccinimide.

15. A water absorbent material according to claim 10, wherein a portion or all of the anhydropolyamino acid having an ethylenically unsaturated double bond in a molecule (A) is hydrolyzed.

16. A water absorbent material according to claim 10, wherein a water absorption ratio of a physiological saline solution is 10 g/g or more.

17. An absorbent article comprising an absorber comprising a water absorbent material and a fiber material arranged between a liquid-permeable sheet and a liquid-impermeable sheet, wherein the water absorbent material is a water absorbent material comprising a copolymer of an anhydropolyamino acid having at least one ethylenically unsaturated double bond in a molecule (A) and a water-soluble monomer having an ethylenically unsaturated double bond (B).

18. An absorbent article comprising an absorber comprising a water absorbent material and a fiber material arranged between a liquid-permeable sheet and a liquid-impermeable sheet, wherein the water absorbent material is a water absorbent material comprising a copolymer of an anhydropolyamino acid having at least one ethylenically unsaturated double bond in a molecule (A), a water-soluble monomer having an ethylenically unsaturated double bond (B), and polysaccharides (C).

19. An absorbent article according to claim 17, wherein the copolymer comprises gel particles.

5 20. An absorbent article according to claim 18, wherein the copolymer comprises gel particles.